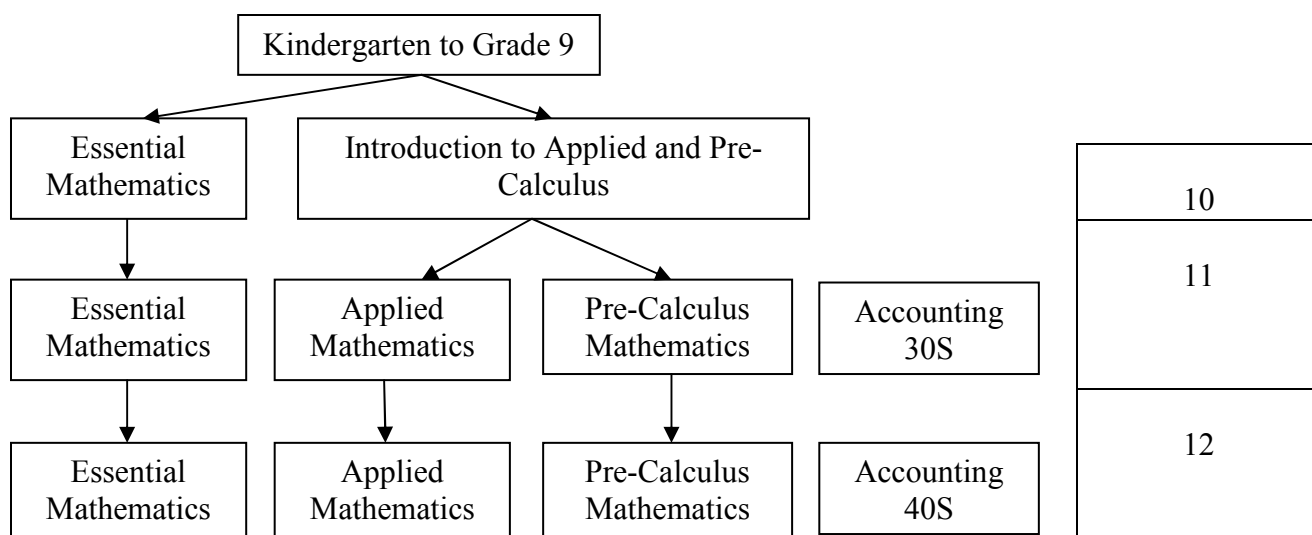


## Math Streams in Manitoba



### **GRADE 10 MATH: CHOOSE ONE OF :**

COURSE	PRE-REQUISITE	COURSE DESCRIPTION	POST-SECONDARY PLANS
<b>Mathématiques au Quotidien 10</b> MAEF2S  (Essential Mathematics 10)	Mathématiques 9	→Emphasis on consumer applications, problem solving, decision-making, number sense and use →Topics include: wages and salaries, trigonometry, consumer decisions, spatial geometry, measurement	→Recommended for students whose plans do not include a focus on mathematics and science-related fields.
<b>Introduction aux Mathématiques Appliquées et Pre-Calcul 10</b> IAPF2S (Intro to Applied and Precalculus Mathematics10)	Mathématiques 9  <b>(Strongly recommended to have grade 9 mark 70% or higher)</b>	→Higher level study of theoretical mathematics including algebra →Emphasis on problem solving, mental mathematics, critical thinking skills.	→Recommended for students whose plans do include study in a field requiring Pre-Calculus or Applied as a prerequisite.

- Gr 10: Introduction to Applied and Pre-Calculus (Introduction au Pr calcul et Appliqu )

**It is recommended that students have minimum 70% grade 9 Math to take this course.**

This pathway is designed to provide students with the mathematical understandings and critical-thinking skills identified for entry into post-secondary programs that require the study of theoretical calculus. The course is intended for students considering post-secondary studies that require a math pre-requisite. This pathway provides students with the mathematical understanding and critical-thinking skills that have been identified for specific post-secondary programs of study. Introduction to Applied and Pre-cal is the pre-requisite for Pre-cal or Applied in grade 11. **The topics studied form the foundation for topics to be studied in both Grade 11 Applied Mathematics and Grade 11 Pre-calculus Mathematics.**

Components of the curriculum are both context driven and algebraic in nature. Students will engage in experiments and activities that include the use of technology, problem solving, mental mathematics, and theoretical mathematics to promote the development of mathematical skills. These experiences will provide opportunities for students to make connections between symbolic mathematical ideas and the world around us.

Regular homework is expected.

Topics Include Linear Modelling, Graphs and Relations, Number Sense, Linear Measurement, Algebra, Coordinate Geometry, Trigonometry, Applications of Linear Functions, Relations and Functions, Polynomials, Surface Area and Volume, Systems.

(\*\*There is currently an option being offered where students can take grade 10 Precal/Appliqu  in first semester, and grade 11 Precal second semester. This allows them to take grade 12 Precal in grade 11, and then University level Math in grade 12. They must sign up for this specifically on the application by writing "grade 11 Math" as an option.\*\*)

- Grade 10-12 Essential Mathematics (Math matiques au Quotidien)

This pathway is designed to provide students with the mathematical understandings and critical-thinking skills identified for entry into the majority of trades and for direct entry into the workforce. Essential Mathematics is intended for students whose post-secondary planning does not include a focus on mathematics and science-related fields. Some topics are Math skills needed by everyone in daily life. Students are expected to work both individually and in small groups on mathematical concepts and skills encountered in a technological society.

Topics include analysis of games and numbers, personal finance (paycheques etc.), Consumer Decisions (unit price, converting currency, etc.), Measurement, Transformations, 2-D geometry, Angle Construction

- **Applied Mathematics - grade 11/ grade 12 - currently not available in French at Kelvin - **\*\*grade 10 Intro Mathématiques Appliquées et Précalcul is pre-requisite\*\*****

This pathway is designed to provide students with the mathematical understandings and critical-thinking skills identified for post-secondary studies in programs that do not require the study of theoretical calculus. It is **context driven** and promotes the learning of **numerical and geometrical problem-solving techniques as they relate to the world around us**. It builds upon the foundation knowledge and skills from Grade 10 Introduction to Applied and Pre-calculus Mathematics and builds a foundation for Grade 12 Applied Mathematics. Primary goals of Applied Math 30S are to have students develop critical-thinking skills through problem solving and model real-world situations mathematically to make predictions.

Topics include financial mathematics, geometry, logical reasoning, measurement, number, relations and functions, statistics and probability.

The choice of Mathematical Streams involves considering interests and abilities now and in the future. Students may want to consult with their Math teacher and/or their guidance counsellor. Yes, your child can get into university or college without Pre-Cal 12. The specific Math courses that are required by colleges and universities depend entirely on the program a student wants to enter. Since many post-secondary studies at universities and college require a certain math course as a prerequisite, students should be very careful in determining which math courses they require when determining their future educational plan. There is information in the guidance office from universities and other post-secondary institutions regarding the requirements for entrance to various faculties. All students are encouraged to access post -secondary information to ensure that they have the proper prerequisites for their future studies. Also refer to the Kelvin course handbook on the Kelvin website for more information.

[https://www.winnipegssd.ca/schools/Kelvin/StudentResources/Documents/Kelvin\\_Handbook.pdf](https://www.winnipegssd.ca/schools/Kelvin/StudentResources/Documents/Kelvin_Handbook.pdf)

### The adolescent learner

By the time your son or daughter reaches high school, she/he is typically capable of identifying how they learn, and where his/her strengths and interests lie. This knowledge will help her/him understand which math pathway will lead to the greatest success for them. Making the right course selection should be a joint decision between you and your son or daughter.

### Set your goals high but...

Educators and parents hope for and encourage success in studies. Parents of struggling students are often hopeful their children will succeed through greater effort and engagement. Though this happens in some cases, in other cases it may not, for several reasons. Students' strengths and interests may lie in other areas. In that case, a more practical mathematics course will be helpful and still meet the course requirements for graduation and many post-secondary education opportunities.

The bottom line: telling a struggling learner to just try harder may actually do more harm than good. In this case, the emphasis should be on making a different course choice.